

# ATCO NEWSLETTER

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July 2017

*The ATCO newsletter is the official publication of a group of amateur television operators known as "AMATEUR TELEVISION IN CENTRAL OHIO Group Inc" published quarterly (January, April, July, and October)*

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## ATCO SPOTLIGHT TOPIC

Thanks to Beasley, K6BJH (SK) and ATVQ Magazine for allowing us to share his cartoons. For the complete book on "The Best of Beasley" go to the ATVQ Magazine web site (<http://atvquarterly.com/>) available for purchase.



## ACTIVITIES ... from my Workbench



Hi guys. It's mid-summer and I haven't started any antenna projects. **WHAT IS THIS WORLD COMING TO???** As usual, I'll let it go until October then decide it's too late to start. Sound familiar? OK, so now I'll do some walking (hopefully 8 miles today) and figure out the order of things to be done. Let's see, home antennas, repeater slot antenna repair, mesh cable installation, test new Lindsay antenna... too many decisions too little time so I'm going to walk and think about it. I'll finish this when I return. More later.

The DVR that Dale received from Dave, AH2AR, is re-packaged and installed at the repeater. As you may recall, a problem occurred when the HiDES transmitter saw no video between the bulletin board completion and the controller shutting down. When the transmitter received a "snow" signal for a brief time it frequently locked up requiring a power down-power up sequence. Dale found that the DVR re-generated video sync during those periods so adding it to the video chain solved those issues. We are using the DVR only as a video processing amp. which works fine but by default it adds a border to the video and inserts a time stamp logo in the upper right corner of the picture. Maybe that's OK but it bothers me so sometime I may try to create my own version that doesn't do that. At my speed, I could have it operational by say, 2020 or so.

Everything else is quiet at the ATV repeater. I'm waiting for the falcons to vacate their nest near there so I can get antenna work done. The 427 antenna really needs work. The radome is completely gone and needs to be replaced. I have a Lindsay zig-zag antenna to replace it but I'd like to field test it before I drag it downtown.

During the next repeater trip, I need to run a MESH cable to the existing unit so we can update the software. Adding a permanent cable is a big deal because it involves adding a cable through a roof opening and that requires building maintenance approval. They are going to be doing building renovations soon so I'll coordinate my effort with theirs. We just had a meeting about that subject and identified a lot of antenna cleanup issues of their own needs to be done. We agreed all equipment needs proper identification so I committed to adding tags to all of our equipment and cables. Everything of ours in the room is properly identified already but cables above roof level are not. Since the SOT workers will be in the vicinity of the antennas, they need to know if there will be an RF hazard.

**Question:** Dale, WB8CJW, asked if we could move the DVB-S repeater input from 438 to 439 so the Dx guys can work into it. They all use 439MHz. We use the same antenna for both 438 digital and 439.25 analog with a common band pass filter tuned for 435 to 440 to accept the 437-439 digital and 435-440 analog. If we move digital to 439, the filter must be retuned to pass just above 440. But the FM repeater activity at 440 and above would cause us significant interference so that's why the digital is where it is now. I'm willing to try the digital at 439 with the filter as is but the upper portion of its bandpass will be attenuated. Will it be OK? I don't know. We'll see.

Finally, a subject I hate to re-visit. I see our membership list is diminishing. As I review the list I notice there are a number of people on it with expired memberships. I know there are a few that are no longer interested but I'm sure the majority enjoy membership status and reading the Newsletter who don't realize their membership has expired. Bob, N8NT, has revised his software to send a notice automatically when expiration is near but I see it doesn't include those that expired before the software upgrade. I am still sending the Newsletter to those expired members but I hope they will re-visit the ATCO web page, log in and pay dues by PayPal or just send a check to Bob. I'm going to send out reminders to each shortly in case they don't see this. Our treasury is getting low and we will need money for food at the Spring and Fall Events but at \$10 per year, it shouldn't be a financial burden. The Newsletter should be worth that alone and it's a great cause. OK, I'll get off my soapbox now.



That's all for now guys. See you at the Columbus Hamfest, Fall Event or Saturday breakfast!  
...WA8RMC

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## MIND BENDER PUZZLE

**Problem:** A man who lives on the 20th floor takes the elevator down to the first floor every morning and goes to work. In the evening, when he comes back; on a rainy day, or if there are other people in the elevator, he goes to his floor directly. Otherwise, he goes to the 16th floor and walks up four flights of stairs to his apartment.

**Question:** Can you explain why?

**Solution:** This is one of the more popular and most celebrated of all lateral thinking logic puzzles. It is a true classic. Although there are many possible solutions that fit the conditions, only the canonical answer is truly satisfying. Read the rest of the Newsletter for the answer.

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## HAMVENTION RESULTS

Hamvention® 2017 drew a happy and enthusiastic crowd to its new venue at the Greene County Hamvention Gets Off to a Promising Start at Its New Venue (**From ARRL Letter May 25, 2017**). Official attendance numbers are 29,296 people. That is the second-largest reported attendance in the history of the event. Hamvention attendance peaked in 1993 at 33,669, before the 1996 change in date from April to May while it was still being held at Hara Arena. Attendance in 2016 for the show's final year at Hara was 25,364. Hamvention relocated to the Greene County Fairgrounds and Expo Center this year, after Hara Arena announced last summer that it was closing. Hamvention General Chair Ron Cramer, KD8ENJ, called 2017 "a most successful year."

"We knew this would be a big year but this was even beyond our expectations," Cramer said. "The challenge was great to reinvent Hamvention® at a new venue in a very short time period. From all the e-mails, letters, and calls I have received over the last few weeks, we have accomplished it successfully." Cramer expressed appreciation for all constructive criticisms and said each idea is being evaluated. Held May 19-21, Hamvention 2017 has received largely positive reviews, despite traffic problems on opening day and heavy rain during the weekend.

"We all recognize the traffic, rain, mud, and parking issues, but part of those issues was corrected even before show weekend was over," Cramer said. "Other issues are being worked on already for next year's show." He and Kalter said the Hamvention Committee has joined Greene County, municipal officials, and the Greene County Fairgrounds and Expo Center Advisory Board in addressing improvements for 2018. Kalter and Cramer also thanked the 657 volunteers who put in long hours to make Hamvention 2017 a reality. The Dayton Amateur Radio Association (DARA) sponsors Hamvention.

"We can't control the rain but we promise there will not be some of the other issues next year," Cramer said. "There may even be some new surprises in store," he added, pointing out that Hamvention has 3 more months to plan for the 2018 event than it did for this year.

"We thank all who came to the show this first year in Greene County and hope to see you again next year," Cramer concluded. "For those that thought they would wait and see how we did, sorry you missed the show but look forward to seeing you next year. Our rough edges will be smoothed out for you by then."

The sponsoring Dayton Amateur Radio Association ([DARA](#)) was forced to relocate the event after the dilapidated Hara Arena in Trotwood closed for good last summer. Traffic jams were the order of the day on opening day, however, with those eager to experience Hamvention's first Xenia outing waiting, or up to 2 hours in traffic. Traffic flow smoothed out on Saturday and Sunday. Heavy rain on Saturday didn't dampen spirits, although it made things a bit dicey in the flea market. ARRL Contributing Editor Ward Silver, N0AX, a Hamvention veteran, gave the show high marks.

"Overall, it's a 9 out of 10, just due to the [Friday] traffic and some mud," he said. "I had a great time, and I think a large collective sigh of relief went up from everybody that it all worked out as well as it did -- rain and traffic issues notwithstanding." Silver said DARA did "a fantastic job," in moving the show from Trotwood to Xenia. "I look forward to many more years of Hamvention. They saved it with this performance." Silver noted that Hamvention had renamed several of the large halls on site after such notables as Hertz, Tesla, and ARRL co-founder Hiram Percy Maxim.

"I liked the way they had the buildings clearly labeled," Silver said, "so you could tell who was inside."



*QST* Managing Editor Becky Schoenfeld, W1BXY, felt Hamvention 2017 went well, by and large. "I visited a lot of forums and generally saw very good attendance," she said. She said ARRL's "Ham Radio Makers and Hackers" forum drew a capacity crowd. "Attendees seemed to be pleased with the number and variety of food trucks." But Schoenfeld and others also remarked on the warm and steamy atmosphere in the exhibit halls on Friday; cooler weather made things more comfortable on Saturday and Sunday.

Schoenfeld said Hamventioners seemed pleased with the choice of cuisine. "Over the course of the weekend, many Hamvention attendees commented on the variety of food choices that had been available, from 'walking tacos' and corn dogs, to pork chop sandwiches and local sausage," she said.

Products debuting at Hamvention included the FLEX-6400/6400M and FLEX-6600/6600M from FlexRadio Systems; the KPA1500 1,500 W amplifier from Elecraft; the IC-7610 HF/50 MHz transceiver from Icom; a new line of microphones from INRAD, and new antennas from MFJ, Momobeam, and SteppIR. The August issue of *QST* will include a roundup of new products.

"Xenia was a significant upgrade over Hara Arena," noted contesteer and Hamvention regular Kirk Pickering, K4RO, told ARRL. He said the large, comfortable forum rooms were far better than those available at Hara Arena. Silver pointed out that the new arrangement meant no "QRM" from adjacent forums.

"I really preferred the county fair atmosphere over Hara and am already looking forward to next year," Pickering added. "I felt good about the new venue and think that DARA has found a nice home for Hamvention. Major kudos to DARA for pulling it together."

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## HAMVENTION IMPROVEMENTS IN THE WORKS FOR 2018!

Even before Hamvention® 2017 had wound down at its new Xenia, Ohio, location, plans were on the drawing board to enhance next year's show. Hamvention 2017 "went reasonably well," spokesperson Mike Kalter, W8CI, allowed, but he acknowledged that there are still a "lot of things to work on" for 2018. Kalter, who lives in Xenia, made the remarks in a [video interview](#) with DX Engineering's Tim Duffy, K3LR, in the wake of the May 19-21 show, which is sponsored by the Dayton Amateur Radio Association ([DARA](#)).

Kalter told Duffy that the staff of the Greene County Fairgrounds and Expo Center on its own initiative met with him, Hamvention General Chair Ron Cramer, KD8ENJ, and others to say they were already formulating plans for improvements. The food and forum venues at the new location got high marks, Kalter told Duffy, but the flea market suffered badly from the effects of heavy rainfall.

"It rained hard, and it rained a lot," Kalter recounted, adding that the flea market area was not as well drained as organizers had expected. "What exactly we're going to do at this point, I don't know," he conceded. "We felt bad about that." The exhibitor tents were another issue, with crowded quarters, wind-blown rain getting into booth spaces, and a lack of lighting. Kalter told Duffy that DARA didn't get the tents it wanted, and that more and better tents are high on the list for next year. DARA also has asked the Greene County Commission to purchase another building for the site, and the Commission will be installing air handlers in buildings for 2018.

On-site parking improvements also are in the works, after a massive traffic jam on opening day. "Traffic on Friday morning was pretty rough, for those that got caught in that, but we worked with the officials...and they fixed it overnight," Kalter said.

"We know that we are stewards of a very important event [for Amateur Radio]," Kalter told Duffy. Hamvention "is not just DARA's show," and exhibitors and organizers alike are buying into the concept of "our Hamvention" and contributing to an effort to improve the event. Kalter called Hamvention "a pillar" that helps to keep Amateur Radio alive and "growing and functioning at a much higher level" than anywhere else.



"We're out in front of it," Kalter assured, "and I want to thank all of our volunteers," referring to the 657 individuals who made Hamvention 2017 happen. "Most of what I heard was very positive."

In a [separate interview](#) with [HamRadioNow](#)'s Gary Pearce, KN4AQ, Kalter said that while he could offer no firm numbers, attendance was "the biggest I've seen at any Hamvention I've ever been to. It was absolutely wall to wall, from one end to the other."

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**Heavy rain during Hamvention made parts of the flea market area rather muddy. [Photo courtesy of DX Engineering]**

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## SATURDAY BREAKFAST UPDATE

Breakfast @ Marshall's on 5/27/17 taken by waitress on Stan's I-phone. This is a record turnout as far as I can remember, since the days at the Hometown Buffet on Morse road. At that that time, Stan's club members also attended which boosted the attendance into the upper teens.

To add to the attendance, Troy's wife son and daughter were also there. Also, a surprise was Jim, WA8UZP, and his wife also were there.



## BAND OPENING

From AH2AR on 6/3/2017. It's the band opening on 5/29/17 from Kentucky to Dayton.

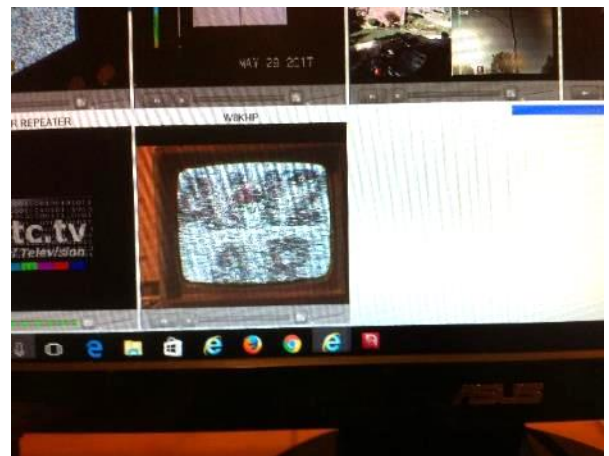
Two of the three photos provided are of W4HTB in Bowling Green Kentucky (A5 Video) as received through the W8BI repeater during the 29 May Band Opening (note that the W8BI repeater is on the lower right quad screen). The other photo is W8KHP being received direct at my QTH (lower left-hand part of the quad screen).

To help clear up some of the confusion of W4HTB's photos here, I was watching W4HTB's A5 signal being retransmitted on the repeater's DVB-T output, and that would explain the rectangular HiDes information boxes in the corner of the single quad screen pictured here. Hank's analog video was "closed circuit" quality through the W8BI repeater, for nearly an hour.

The waveforms on the upper right quad in the photos are the spectral presentations from the FunCube Pro Dongle being used as a spectrum monitor at my QTH.

On the same day, here is W8URI, W4HTB, and AH2AR as received at W8KHP

...Dave P



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## ATV MILESTONE

I hit an ATV milestone. Since I started in ATV about 30 years ago I have never had a P5 signal into the repeater from home until today. The repeater is only about 3.5 miles from home.

Using a HiDes DVB-T exciter and a KH6ATV PA70-9B Amp at high power about 10 watts output, I have a 100%, P5 signal into the Ebright repeater site from home. This is on 438.0 at 3 MHz bandwidth. I have a 22-element rib cage, Downeast preamp and a DCI filter feeding the HiDes HV-120 receiver through 150' of RG6. The best I have ever had is a P3 on 439.250 AM at about 70 watts. I have even tried the low power setting on the amp and still had a solid signal with occasional pixilation. I am looking at the repeater output which is the DATV-Express board feeding a Mini Circuits 1 watt Amp through 150" of 7/8" hardline. This feeds a Downeast 30-watt amp through 30' of LMR400 to a Comet Vertical.

I do see some latency of about 1.5 seconds as I have everything set up. I want to put the DVB-T transmitter at the repeater site for the next experiment using the rib cage and see what distance I can get.

I only wish that Andy, N3CUJ, (SK) my longtime partner in this endeavor was here in person and not just in spirit to celebrate. This Digital stuff is awesome!

...Dave KC3AM



## ATCO SPRING EVENT

We had very good attendance at our May 7 Spring Event this year. If you missed it, you missed a lot of activity, good food and fantastic door prizes. To top it off we had a drone demonstration by John Beal's (W8NX) son and a MESH presentation by Bob Dixon, W8ERD. We had 30 people attend this year which was a pleasant surprise.

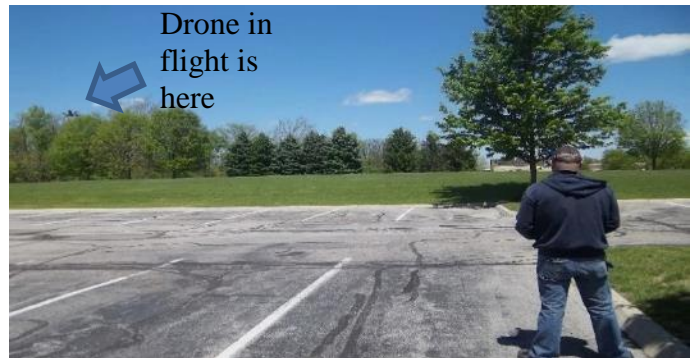
On the right, you can see the free food available. No one went home hungry. I mixed it up a bit this time and had Sub sandwiches with all the fixings.

Next, we had a great drone demonstration by John's son. It is totally amazing how fast and controllable they are. He had a large quad copter that he flew outside (Right photo) that he said went up to 60 miles per hour.

Inside he flew his "micro copter", (about 6" Dia.) out the cafeteria rear door, down the hall and back in the front door again all while steering it with LCD goggles.



Next, MESH presentations by W8ERD and W8RUT.



Ahh, at last, the "prize" tables. As you can see there was enough prize material so no one went home without something. A great time for all! ...WA8RMC





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## HAMVENTION FRIDAY NIGHT DINNER

Here we are at the China Buffet restaurant in Dayton for the Friday Night ATV dinner. It's REALLY great, guys! It's too bad that the ATCO group hasn't attended in years past. It's a great way to rest and cool off after a day roaming the Hamvention flea market on Friday. The location is close to being on the way back to Columbus. Maybe next year????

Anyway, there were about 35 people in attendance who enjoyed a good inexpensive dinner, yes, it's Chinese but they have American stuff there also. After dinner, we had a round table discussion about ATV subjects where we found out what the other ATV clubs are doing.

Troy, AC8XP, and Seamus, newly licensed KE8GTT, were the only Columbus Hams there (except me). They both said they learned something and had a good time. See guys? I'm expecting more Columbus ATVers next year.



In fact, Seamus won a dollar from Bill Brown, WA8ELK, for being the person that launched the balloon that won for traveling the farthest. There were three balloons launched from the Hamvention that day....WA8RMC

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## HAMVENTION SATURDAY ATV FORUM

The ATV forum was a very unexpected success this year. I was anticipating the attendance to be less than the 75 people we had last year. Instead I counted over 150 people. Why, I don't know. Maybe it was to get out of the rain or maybe it was because of the overall high attendance this year. In any case, it was very welcome.



As usual, Gordon West started it off with some entertaining and humorous subjects.

That was followed with Mike Collis' discussion about the ATN activity in California. I followed with a discussion about comparing DVB-S to DVB-T operation. Which is better???

The forum was cut short this year because we had only one hour. Maybe next year we can get a little more so we can have more subjects.  
...WA8RMC



## AMATEUR RADIO PARITY ACT IS INTRODUCED IN US SENATE

*(Terry, this may be the legislation you've been hoping for!!!!!!!!!!!! I hope it will make it this time.) WA8RMC*

The [Amateur Radio Parity Act](#) of 2017 was introduced in the US Senate on July 12, marking another step forward for this landmark legislation. Senators Roger Wicker (R-MS) and Richard Blumenthal (D-CT) are the Senate sponsors. The measure will, for the first time, guarantee all radio amateurs living in deed-restricted communities governed by a homeowners' association (HOA) or subject to any private land-use regulations, the right to erect and maintain effective outdoor antennas at their homes. The Senate bill, S. 1534, is identical to H.R. 555, which passed the US House of Representatives in January.



"Amateur Radio continues to be a critical part of our emergency communications operations," Wicker said. "Mississippians learned firsthand after Hurricane Katrina how Amateur Radio operators can provide a resilient, distributed network to first responders and disaster relief organizations when other communications tools fail."



**Senator Roger Wicker (R-MS)**

"Amateur Radio operators provide an invaluable service to their communities by assisting local emergency communication efforts when disasters occur and main lines are down," Blumenthal said. "This bipartisan measure ensures that operators have access to the tools they need to support our first responders when lives are at stake."

FCC Chairman Ajit Pai applauded the bill in late January, saying that it would "help Amateur Radio operators, and take several steps to promote public safety."

ARRL President Rick Roderick, K5UR, expressed the League's appreciation to the Senate sponsors. "ARRL is grateful for the support of Senators Wicker and Blumenthal for sponsoring this important piece of legislation, and for advocating this bill for the past 3 years," he said. "Their continuing support is critical to the success of our efforts." President Roderick also thanked Senator John Thune (R-SD), who chairs the Senate Commerce Committee, for "championing the Parity Act in the Senate since the beginning of our effort."

The bill has enjoyed widespread, bipartisan support. In the 114th Congress, nearly 130 cosponsors signed onto the legislation in the House and the Senate. The legislation, which strikes a carefully crafted balance for all concerned parties, is the result of months of work culminating in the [accord](#) reached by ARRL and the Community Associations Institute (CAI). The measure provides for the guarantee of an effective outdoor antenna while protecting the aesthetic concerns of HOAs.

In a statement, ARRL said it looks forward to working with the bipartisan leadership of the Senate and the Commerce Committee to help move the Wicker-Blumenthal legislation through the Senate and to the President's desk.





## “KEN’S KORNER” – MESH ACTIVITY

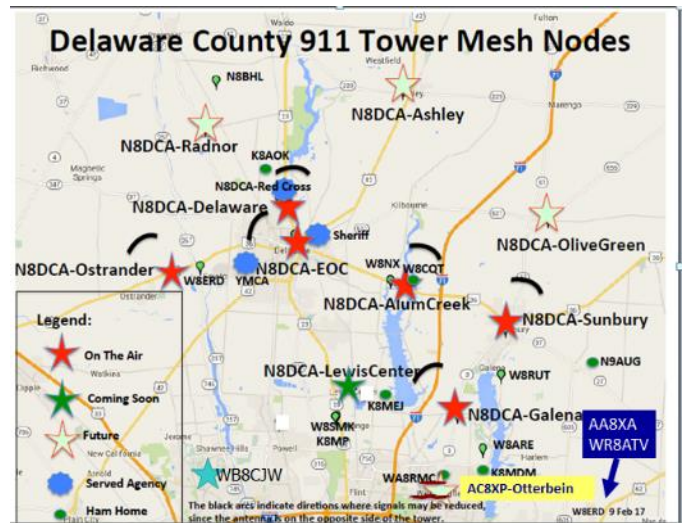
*Here's a new section that I hope to continue that will be dedicated to MESH activity. Everyone is encouraged to help with information and activity progress. WA8RMC*

## Ham MESH continues to grow in number of Stations and Applications available in Central Ohio.

Ham Mesh continues to grow nationwide as well as Central Ohio. Since the ATCO Technology Fair in March this year where I presented the local “State of the Art” and more importantly, why do the art at all, more progress has been made. One of the slides I used during the presentation/ Demo is shown below;

In addition to the two ATCO nodes at our ATV Repeaters site. The chart shows both the so called “911 Tower Mesh nodes” and individual stations. The chart shows six nodes operational with plans and funding to install another Node at Lewis Center. Three more are possible in the north part of Delaware County, but not yet funded.

Since the March ATCO meeting, with the help of Troy, AC8XP, we have installed Nodes (3) at Otterbein College with more expected. The prime reason as a means to attract young people to Ham Radio and Mesh at the college level. There is an idea to hold classes on Mesh in the Fall of this year. If you are interested, please let me know.



There are two more towers in the works, one in the Westerville area and one in the Gahanna area, both of which are fully funded.

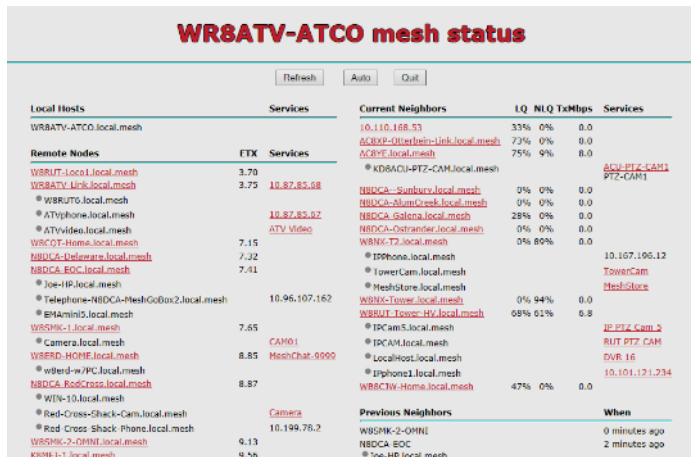
Some individual station Nodes have come on the air including; WB8CJW, AC8YE and Stan AA8XA has added new nodes.

Below is an example of what our ATCO Node Downtown can link and vice versa.

In addition, we have at least 3 mobile stations capable, including AA8XA, W8ARE, AC8YE, and W8RUT. There are also a number of portable nodes available to serve the agencies we serve, like the Half Iron Man coming up in a few weeks.

## New Mesh Applications

The current Mesh stations continue to grow the number of IP cameras accessible on Mesh followed by IP Phones and Mesh Chat. Email, has not become popular just yet. We have a large File Server (QNAP) for storing our documents, pictures, procedures, Mesh Software, and as a place to create your own web page on Mesh net. We currently use about a half of a percent of its current 4 T-bytes of storage capacity which can easily be doubled.

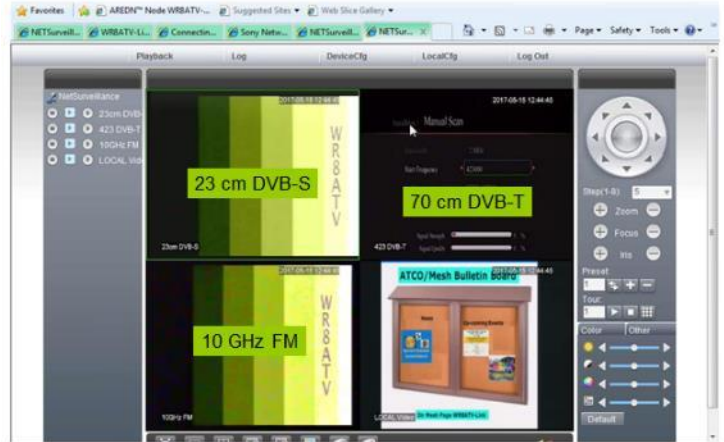
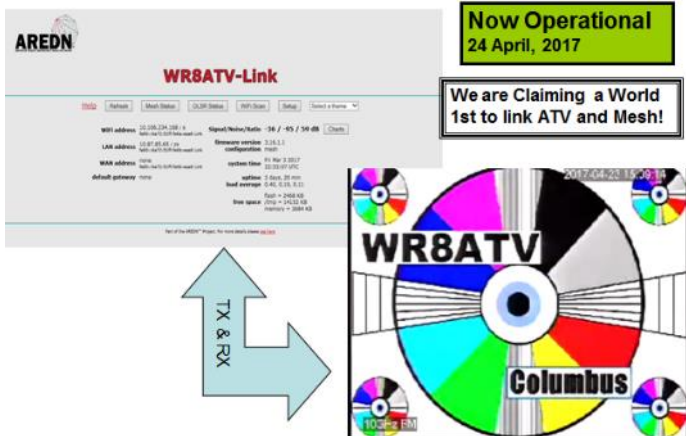


A new application is the ability (and is operational) to connect Mesh to our ATV repeater and send video both ways. See chart.



## ATV Repeater Screens & Bulletin Board

### Mesh to WR8ATV Repeater Link



Above chart shows 3 channels of WR8ATV video 70 cm DVB-T, 23 cm DVB-S and 10 GHz FM video on Mesh. The 4<sup>th</sup> screen is a Mesh Bulletin Board. The B Board also carries instruction on how to transmit your Mesh Video via our ATV repeater, WR8ATV. Anyone with a Mesh Node connected to the Mesh can see the above screen with a mouse click. Clicking on any panel will make that panel full screen.

### How do I get more information and some help from an Elmer?

Our Breakfast Mesh group recently decided to use the ATCO meeting place, 147.48 MHz FM, as our coordination channel. It is true many Meshies are current or former ATV'ers so this selection for now makes sense. The recent article in QST is very good as well.

This article assumes the reader attended the March ATCO Technology Event and was exposed to Mesh basics during the presentation and demo. For that reason, I did not cover that material here. If you would like a copy of the March presentation, just send me an email ([gkenmorris@gmail.com](mailto:gkenmorris@gmail.com)).

If you would like more information about Mesh, ATV or even 630 Meter station development or Buckeye Lake future development, please let me know!

...Ken-W8RUT

614209 1763

[gkenmorris@gmail.com](mailto:gkenmorris@gmail.com)

### Where do I find out more about Mesh?

- [www.aredn.org](http://www.aredn.org)
- [www.broadband-hamnet.org](http://www.broadband-hamnet.org)
- ARRL Book "High Speed Multimedia for Hams"
- <http://webstore> on our Mesh Network
- First Monday each month Breakfast (Maxtown)- Contact W8RUT
- Most any local Meshie. Elmers available




## MIND BENDER PUZZLE ANSWER

The man is of short stature. He can't reach the upper elevator buttons, but he can ask people to push them for him or he can push them with his umbrella. (If you have a Mind Bender of your own, I'd like to see it!)

...WA8RMC)

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## LOCAL HAMFEST SCHEDULE

This section is reserved for upcoming Hamfests. They are limited to Ohio and vicinity easily accessible in one day. Anyone aware of an event incorrectly or not listed here; notify me so it can be corrected. This list will be amended, as further information becomes available. To see additional details for each Hamfest, Control Click on the blue title and the magic of the Internet will give you the details complete with a map! To search the ARRL Hamfest database for more details, CTL click [ARRLWeb: Hamfest and Convention Calendar](#) ... WA8RMC.

### 07/30/2017 | [Portage Hamfair '17](#)

**Location:** Ravenna, OH

**Type:** ARRL Hamfest

**Sponsor:** Portage Amateur Radio Club

**Website:** <http://hamfair.com>

### 08/05/2017 | [Columbus, Ohio Hamfest](#)

**Location:** Grove City, OH

**Type:** ARRL Hamfest

**Sponsor:** Voice of Aladdin Amateur Radio Club (W8FEZ)

**Website:** <http://columbushamfest.com>

### 08/20/2017 | [Warren ARA Tailgatefest](#)

**Location:** Cortland, OH

**Type:** ARRL Hamfest

**Sponsor:** Warren Amateur Radio Association

**Website:** <http://w8vtd.org>

### 08/27/2017 | [9th Annual Cuyahoga Falls ARC Tailgate Hamfest](#)

**Location:** Stow, OH

**Type:** ARRL Hamfest

**Sponsor:** Cuyahoga Falls Amateur Radio Club

**Website:** <http://www.cfarc.org/tailgate.php>

### 09/10/2017 | [Findlay Hamfest](#)

**Location:** Findlay, OH

**Type:** ARRL Hamfest

**Sponsor:** Findlay Radio Club

**Website:** <http://www.findlayradioclub.org>

### 09/23/2017 | [OH-KY-IN ARS Hamfest](#)

**Location:** Cincinnati, OH

**Type:** ARRL Hamfest

**Sponsor:** OH-KY-IN Amateur Radio Society

**Website:** <http://www.ohkyin.org>

### 09/24/2017 | [Cleveland Hamfest and Computer Show](#)

**Location:** Berea, OH

**Type:** ARRL Hamfest

**Sponsor:** Hamfest Association of Cleveland

**Website:** <http://www.hac.org>

### 11/04/2017 | [Grant ARC Hamfest](#)

**Location:** Georgetown, OH

**Type:** [ARRL](#) Hamfest

**Sponsor:** Grant [Amateur Radio](#) Club

**Website:** <http://garcoho.net/>

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## TUESDAY NITE NET ON 147.48 MHz SIMPLEX

Every Tuesday night @ 9:00PM WA8RMC hosts a net for the purpose of ATV topic discussion. There is no need to belong to the club to participate, only a genuine interest in ATV. All are invited. For those who check in, the general rules are as follows: Out-of-town and video check-ins have priority. A list of available check-ins is taken first then a roundtable discussion is hosted by WA8RMC. After all participants have been heard, WA8RMC will give status and news if any followed by late check-in requests or comments. We usually chat for about ½ hour so please join us locally or via internet at [www.BATC.tv](http://www.BATC.tv) then ATV repeaters then WR8ATV.

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## ATCO TREASURER'S REPORT - de N8NT

OPENING BALANCE (05/22/17) .....	\$ 1487.14
RECEIPTS(dues).....	\$ 70.00
Spring Event food.....	\$ (162.90)
PayPal fee.....	\$ (2.36)
CLOSING BALANCE (07/22/17) .....	\$ 1391.88

# ATCO REPEATER TECHNICAL DATA SUMMARY

Location:	Downtown Columbus, Ohio	
Coordinates:	82 degrees 59 minutes 53 seconds (longitude) 39 degrees 57 minutes 45 seconds (latitude)	
Elevation:	630 feet above the average street level (1460 feet above sea level)	
TV Transmitters:	423.00 MHz DVB-T, 10 W cont, FEC=7/8, Guard=1/32, Const=QPSK, FFT=2K, BW=2MHz, PMT=4095, PCR=256, Video=256, audio=257 427.25 MHz Analog VSB AM, 50 watts average 100 watts sync tip (cable channel 58) 1258 MHz 40 watts FM analog 1268 MHz DVB-S QPSK 20W continuous. SR=3.125MS, FEC=3/4, PMT=32, Video=162, Teletext=304, PCR=133, Audio=88, Service =5004) 2395 MHz Mesh Net transceiver 600mw output (channel 1 -2). ID is WR8ATV-2 10.350 GHz: 1 watt continuous analog FM	
Link transmitter:	446.350 MHz: 5 watts NBFM 5 kHz audio. This input is used for control signals.	
Identification:	423, 427, 1258, 1268 MHz, 10.350 GHz transmitters video ID every 10 min. with active video and information bulletin board every 30 minutes. 423 MHz digital, 1268 MHz digital & 10.350 GHz analog - Continuous transmission of ATCO & WR8ATV with no input signal present.	
Transmit antennas:	423.00 MHz – 8 element Lindsay horizontally polarized 6dBd gain “omni” 427.25 MHz - Dual slot horizontally polarized 7 dBd gain “omni” major lobe east/west, 5dBd gain north/south 1258 MHz - Diamond vertically polarized 12 dBd gain omni 1268 MHz - Diamond vertically polarized 12 dBd gain omni 2395 MHz - Comet Model GP24 vertically polarized 12 dBd gain omni (Used for experimental Mesh Net operation) 10.350 GHz - Commercial 40 slot waveguide slot horizontally polarized 16 dBd gain omni	
Receivers:	147.480 MHz - F1 audio input with touch tone control. (Input here = output on 446.350) 438.000 MHz - DVB-T QPSK, 2K BW. Receiver will auto configure for FEC's and PID's. (Input here = output on all TV transmitters) 439.250 MHz - A5 NTSC video with FM subcarrier audio, <b>lower sideband</b> . (Input here = output on all TV transmitters) 449.975 MHz - F1 audio input aux touch tone control. 131.8 Hz PL tone. (Input here = output on 446.350). 1288.00 MHz - F5 video analog NTSC. (Input here = output on all TV transmitters) 1288.00 MHz - DVB-S QPSK digital SR=4.167Msps, FEC=7/8. PIDs: PMT=133, PCR=33, Video=33, Audio=49 (Input here feeds all TV transmitters and also goes directly to 1268 MHz DVB-S digital output channel 2.) 2398.00 MHz - F5 video analog NTSC. (Input here = output on all TV transmitters) 10.450 GHz - F5 video analog NTSC. (Input here = output on all TV transmitters)	
Receive antennas:	147.480 MHz - Vert. polar. Diamond 6dBd dual band (Shared with 446.350 MHz link output transmitter) 438.00/439.250 MHz - Horizontally polarized dual slot 7 dBd gain major lobe west (Shared with 438 & 439 receivers) 1288.00 MHz - Diamond vertically polarized 12 dBd gain omni (shared with analog and DVB-S receivers) 2395.00 MHz - Comet Model GP24 vertically polarized 12 dBd gain omni (Used for experimental Mesh Net operation) 10.450 GHz - Commercial 40 slot waveguide horizontally polarized 16 dBd gain omni	
Auto mode	<u>Touch Tone</u>	<u>Result (if third digit is * function turns ON, if it is # function turns OFF)</u>
Input control:	00*	turn transmitters <b>on</b> (enter manual mode-keeps transmitters on till 00# sequence is pressed)
	00#	turn transmitters <b>off</b> (exit manual mode and return to auto scan mode)
	264	Select Channel 4 Doppler radar. (Stays on for 5 minutes) Select # to shut down before timeout.
	004	Select 10.450 GHz receiver. ( <b>Always exit by selecting 001</b> )
	003	Select room camera ( <b>Always exit by selecting 001</b> )
	002	Select roof camera. Select room cam first then 002 for roof cam. ( <b>Always exit by selecting 001</b> )
	001	Select 2398 MHz receiver then 00# for auto scan to continue
Manual mode Functions:	00* then 1 for Ch. 1	Select 439.25analog /438digital receiver (if video present on digital, it is selected. Otherwise analog)
	00* then 2 for Ch. 2	Select 1280 digital receiver
	00* then 3 for Ch. 3	Select 1280 analog receiver
	00* then 4 for Ch. 4	Select 2398 receiver
	00* then 5 for Ch. 5	Select video ID (17 identification screens)
	01* or 01#	Channel 1 439.25 MHz scan enable (hit 01* to scan this channel & 01# to disable it)
	02* or 02#	Channel 2 1288 MHz digital receiver scan enable
	03* or 03#	Channel 3 1288 MHz analog receiver scan enable
	04* or 04#	Channel 4 2398 MHz scan enable
	A1* or A1#	Manual mode select for 439.25 receiver audio
	A2* or A2#	Manual mode select for 1288 digital receiver audio
	A3* or A3#	Manual mode select for 1288 analog receiver audio
	A4* or A4#	Manual mode select for 2398 receiver audio
	C0* or C0#	Beacon mode – transmit ID for twenty seconds every ten minutes
	C1* or C1#	C1* to turn off 438 MHz DVB-T Tx, C1# to enable it (Must be in manual mode to enable this function).
	C2* or C2#	C2* to turn off 423 MHz DVB-T Rx, C2# to enable it (Must be in manual mode to enable this function).

**Note: The DVB-T Tx and Rx units can lock up when they lose video or see bad video. When this happens, power must be cycled. To do this select C1\* or C2\* to turn off power. A few seconds later select C1# or C2# whichever appropriate to restore power to selected unit. Wait about 15 to 30 seconds to see restored operation. (Example: To reset the DVB-T receiver enter C2\*, wait a few seconds then C2#)**

# ATCO MEMBERS as of July 2017

Call	Name	Address	City	St	Zip	Phone
KD8ACU	Robert Vieth	3180 North Star Rd	Upper Arlington	OH	43221	614-457-9511
AH2AR	Dave Pelaez	1348 Leaf Tree Lane	Vandalia	OH	45377	937-264-9812
W8ARE	Larry Meredith III	6070 Langton Circle	Westerville	OH	43082-8964	
VK3BFG	Peter Cossins					
N9BNN	Michael Glass	6836 N. Caldwell Rd	Lebanon	IN	46052	
WB8CJW	Dale Elshoff	8904 Winoak Pl	Powell	OH	43065	614-210-0551
N8COO	C Mark Cring	2844 Sussex Place Dr.	Grove City	OH	43123	614-836-2521
N8CXI	Garry Cotter	2367 Northglen Drive	Columbus	OH	43224	
N3DC	William Thompson	6327 Kilmer St	Cheverly	MD	20785	301-772-7382
K8DMR	Ron Fredricks	8900 Stonepoint Ct	Jennison	MI	49428-8641	
W8DMR	Bill Parker	2738 Florbunda Dr	Columbus	OH	43209	
WA8DNI	John Busic	2700 Bixby Road	Groveport	OH	43125	614-491-8198
K8DW	Dave Wagner	2045 Maginnis Rd	Oregon	OH	42616	419-691-1625
WB8DJW	Roger McEldowney	5420 Madison St	Hilliard	OH	43026	614-405-1710
KB8EMD	Larry Baker	4330 Chippewa Trail	Jamestown	OH	45335-1210	
KC8EVR	Lester Broadie	108 N Burgess	Columbus	OH	43204	
N8FRT	Tom Flanagan	6156 Jolliff St.	Galloway	OH	43119	
W8FZ	Fred Stutske	8737 Ashford Lane	Pickerington	OH	43147	
WA8HFK,KC8HIP	Frank & Pat Amore	P.O. Box 2252	Helendale	CA	92342	614-777-4621
WA8HNS	Mike Gray	5029 St Rt 41 NW	Washington Ct Hs	OH	43160-8740	740-335-5133
K8KDR,KC8NKB	Matt & Nancy Gilbert	5167 Drumcliff Ct.	Columbus	OH	43221-5207	614-771-7259
W8KHP	Allan Vinegar	2043 Treetop Lane	Hebron	Ky	41048	
WA8KKN	Chuck Wood	5322 Spruce Lane	Westerville	OH	3082-9005	614-523-3494
WA8KQQ	Dale Waymire	225 Riffle Ave	Greenville	OH	45331	937-548-2492
N8LRG	Phillip Humphries	30856 Coshoccon Road	Walhonding	OH	43843	614-3543744
W8MA	Phil Morrison	154 Llewellyn Ave	Westerville	OH	43081	
KA8MFD	Ross McCoy	227 S Boundary St PO Box 9	Edison	OH	43320	
KA8MID	Bill Dean	2630 Green Ridge Rd	Peebles	OH	45660	
N8NT	Bob Tournoux	3569 Oarlock Ct	Hilliard	OH	43026	614-876-2127
W8NX, KA8LTG	John & Linda Beal	5001 State Rt. 37 East	Delaware	OH	43015	740-369-5856
WU8O	Tom Walter	15704 St Rt 161 West	Plain City	OH	43064	614-733-0722
N0OBG	Jim Conley	33 Meadowbrook C C Est	Ballwin	MO	63011	
W6ORG, WB6YSS	Tom, Maryann O'Hara	2522 Paxson Lane	Arcadia	CA	91007-8537	626-447-4565
N8OCQ	Bob Hodge Sr.	3750 Dort Place	Columbus	OH	43227-2022	
KE8PN	James Easley	1507 Michigan Ave	Columbus	OH	43201	614-421-1492
WA8RMC	Art Towslee	438 Maplebrooke Dr W	Westerville	OH	43082	614-891-9273
W8RUT,N8KCB	Ken & Chris Morris	2895 Sunbury Rd	Galina	OH	43021	
KB8RVI	David Jenkins	1941 Red Forest Lane	Galloway	OH	43119	614-853-0679
W8RWR	Bob Rector	135 S. Algonquin Ave	Columbus	OH	43204-1904	614-276-1689
W8RXX, KA8IWB	John & Laura Perone	3477 Africa Road	Galena	OH	43021	614-579-0522
WA6RZW	Ed Mersich	34401 Columbine Trl West	Elizabeth	CO	80107	
KB8SSH	Mike Cotts	3424 Homecroft Dr	Columbus	OH	43224	614-371-7380
WA6SVT	Mike Collis	PO Box 1594	Crestline	CA	92325	
KD8TIZ	Bob Holden	5161 Goose Lane Rd	Alexandria	OH	43001-9730	614-562-8441
K8TPY, K8FRB	Jeff & Dianna Patton	3886 Agler Road	Columbus	OH	43219	
NR8TV	Dave Kibler	243 Dwyer Rd	Greenfield	OH	45123	937-981-1392
W8URI	William Heiden	5898 Township Rd #103	Mount Gilead	OH	43338	419-947-1121
KB8UWI	Milton McFarland	115 N. Walnut St.	New Castle	PA	16101	
WA8UZP	James Reed	818 Northwest Blvd	Columbus	OH	43212	614-297-1328
KB9VGD	Gary Oaks	472 Storle Ave	Burlington	WI	53105-1028	
KC8WRI	Tom Bloomer	PO Box 595	Grove City	OH	43123	
AA8XA	Stan Diggs	2825 Southridge Dr	Columbus	OH	43224-3011	
AC8XP	Troy Bonte	5210 Smothers Road	Westerville	OH	43081	
AC8YE	Larry Howell	1163 Cloverknoll Ct	Columbus	OH	43235-4008	
KB8YMQ	Jay Caldwell	4740 Timmons Dr	Plain City	OH	43064	
KC8YPD	Joe Ebright	3497 Ontario St	Columbus	OH	43224	
KD8YYP	Anna Reed	818 Northwest Blvd	Columbus	OH	43212	
WB8YTZ	Joe Coffman	233 S. Hamilton Rd	Gahanna	OH	43230-3347	
N8YZ	Dave Tkach	2063 Torchwood Loop S	Columbus	OH	43229	614-882-0771
KA8ZNY,N8OOY	Tom & Cheryl Taft	386 Cherry Street	Groveport	OH	43125	614-202-9042
W8ZCF	Farrell Winder	6686 Hitching Post Ln.	Cincinnati	OH	45230	513-218-3876
N8ZM	Tom Holmes	1055 Wilderness Bluff	Tipp City	OH	45371	



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## ATCO MEMBERSHIP INFORMATION

Membership in ATCO (Amateur Television in Central Ohio) is open to any licensed radio amateur who has an interest in amateur television. The annual dues are \$10 per person payable on January 1 of each year. Additional members within an immediate family and at the same address are included at no extra cost.

ATCO publishes this Newsletter quarterly in January, April, July, and October. It is sent to each member without additional cost. All Newsletters are sent via Email unless the member does not have an internet connection.

The membership period is from January 1<sup>ST</sup> to December 31<sup>ST</sup>. New members joining before August will receive all ATCO Newsletters published during the current year prior to the date they join ATCO. For example, a new member joining in June will receive the January and April issues in addition to the July and October issues. For those joining after August 1<sup>ST</sup>, can elect to receive a complementary October issue with the membership commencing the following year or get the previous (3) Newsletters. Your support of ATCO is welcomed and encouraged.

Membership expiration notices will be sent out in January in lieu of Newsletters for those with an expired membership.

**NOTE:** Dues records on your individual portion of the ATCO website are listed as the date money is received and shows due one year from that date. The actual expiration is on January of the following year to keep the dues clock consistent with the beginning of each year.

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## ATCO MEMBERSHIP APPLICATION

RENEWAL ☐ NEW MEMBER ☐ DATE \_\_\_\_\_

CALL \_\_\_\_\_

OK TO PUBLISH PHONE # IN NEWSLETTER YES ☐ NO ☐

HOME PHONE \_\_\_\_\_

NAME \_\_\_\_\_

INTERNET Email ADDRESS \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_ - \_\_\_\_\_

FCC LICENSED OPERATORS IN THE IMMEDIATE FAMILY \_\_\_\_\_

COMMENTS \_\_\_\_\_

ANNUAL DUES PAYMENT OF \$10.00 ENCLOSED CHECK ☐ MONEY ORDER ☐

Make check payable to ATCO or Bob Tournoux & mail to: Bob Tournoux N8NT 3569 Oarlock CT Hilliard, Ohio 43026. Or, if you prefer, pay dues via the Internet with your credit card. Go to [www.atco.tv](http://www.atco.tv) and fill out the "pay ATCO dues" section. Alternately, you can use the ATCO web site [www.atco.tv/PayDues.aspx](http://www.atco.tv/PayDues.aspx) directly. Credit card payment is made through "PayPal" but you DO NOT need to join PayPal to send your dues. Simply DO NOT fill out the password details and there will be no "PayPal" involvement.

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## ATCO CLUB OFFICERS

President: Art Towslee WA8RMC

Repeater trustees: Art Towslee WA8RMC

V. President: Ken Morris W8RUT

Ken Morris W8RUT

Treasurer: Bob Tournoux N8NT

Dale Elshoff WB8CJW

Secretary: Mark Cring N8COO

Statutory agent: Stan Diggs AA8XA

Corporate trustees: Same as officers

Newsletter editor: Art Towslee WA8RMC

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## NEW MEMBER(S)

Let's welcome the new members to our group! If any of you know anyone who might be interested, let one of us know so we can flood them with information. New members are our group's lifeblood so it's important we aggressively recruit new faces.

AC8YE Larry Howell Columbus, Oh

ATCO Newsletter  
c/o Art Towslee -WA8RMC  
438 Maplebrooke Dr. W  
Westerville, Ohio 43082

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**FIRST CLASS MAIL**

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**REMEMBER...CLUB DUES ARE NEEDED.  
CHECK THE  
MEMBERS PAGE OF ATCO WEBSITE FOR THE EXPIRATION DATE.  
SEND N8NT A CHECK OR USE PAYPAL IF EXPIRED.**

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